SLADE NATIONAL WILDLIFE REFUGE

DAWSON, NORTH DAKOTA

NARRATIVE REPORT

January 1 to December 31, 1966

PERMANENT PERSONNEL

Marvin Mansfield	-	Refuge Manager
Karl Hansen	-	Wildlife Biologist (EOD 8/1/66)
Theodore Schauer	-	Laborer Maintenanceman
Henry Hagness	-	Refuge Clerk (Resigned 6/17)
Mark Fairfield	-	Refuge Clerk (8/1 - 12/2 (Resigned))
Gerald Olson	-	Refuge Clerk (EOD 12/5/66)

TEMPORARY EMPLOYEES

Alvin L. Hottman	-	Laborer (3/28 - 9/23/66)
Franklin H. Knoke	-	Laborer (6/13 - 9/16/66)

C O N T E N T S

I. GENERAL

A. Weather Conditions.

	Precipitation			Max.	Min.
	Month	Normal	Snowfall	Temp.	Temp.
January	.24	.44	6.0	28	-35
February	.56	.37	7.5	43	-29
March	1.10	.60	28.0	72	- 9
April	1.81	1.32	13.5	67	14
May	1.01	2.26		92	20
June	4.45	3.88		92	36
July	2.71	2.51		96	50
August	2.49	2.04		94	43
September	.23	1.71		90	33
October	.84	1.20	.5	83	17
November	.24	.45	6.0	49	- 8
December	.18	.32	4.5	46	-18
Annual Totals	15.86	17.10	66.0 Extremes	96	-35

The information contained in the above table was obtained from the records of the official U. S. Weather Bureau Station located eight miles west of the refuge in Steele, North Dakota.

Snow depth was 2" at the start of the year. This increased to 10" on February 9 and reached a peak around 20" on March 4 after the blizzard. This melted rapidly and, except for drifts, the snow was nearly gone at the end of March. The April peak was 4". Fall and early winter snowfall was light and the year ended with about 1" of snow on the ground.

January was extremely cold with only 5 days having a low temperature above zero. There were 4 days of 30 or more below zero and eight more at least 20 below. There were 15 days when the high never got above zero. The highest temperature was a 25 on the 9th.

February continued cold with 16 days recording zero or below but there were two thawing periods and a high of 42 was reached on the 6th. A heavy 7" snow fell on the 9th.

March will be remembered for a long time as the month of the great blizzard.* Except for the blizzard, the month was warm with only four days below zero and ten days of 50 or above.

April was damp with precipitation recorded on 18 days but the total was only $\frac{1}{2}$" above normal. Temperatures were near normal.

Moisture in May was only about half of normal while temperatures were slightly below normal. The high was 92 on the 22nd and the low was 20 on the 9th.

Rain fell on 12 days in June with 1.45" recorded on the 4th. The last three days of the month were the only days with 90 or above.

July temperatures averaged nearly three degrees above normal while precipitation was slightly above normal. There were ten days with 90 or above. A thunderstorm struck on the 8th with strong northwesterly winds.

August was cool and damp with nearly $\frac{1}{2}$" of moisture over the normal. The temperature hit 90 on only one day while the high on ten days was 70 or below.

September and October had near normal temperatures but below normal precipitation. The first frost occurred on September 14 and the first snowfall on October 21.

November was cold and dry with the high temperature only 45 while the low was 7 below. Snow reached a maximum depth of 4" on the 10th.

Several December thaws practically eliminated the 4" of snow that fell. No severe storms or cold weather were recorded and the year ended on a good note as far as weather was concerned.

B. Habitat Conditions.

1. Water.

Runoff, resulting from the March blizzard, was good (though not as good as expected) and refuge potholes were in their best spring and summer condition since the 1950's. However,

the dry fall had its affect and three of the water areas were lower at freeze-up than the year before. See Table Number 1.

TABLE NUMBER 1

MSL Elevation
Slade Refuge Pools

	January		December		Maximum	
	1966	1965	1966	1965	1966	1965
Harker Lake	1731.93	1731.29	1732.27	1731.93	1733.17	1732.24
Upper Harker	1731.85	1731.15	1731.76	1731.85	1732.66	1732.12
South Marsh	1732.36	1732.01	1732.73	1732.36	1734.09	1733.04
NW Slough	1722.20	1721.71	1721.69	1722.20	1723.02	1723.54
Hdqtrs. Lakes	1726.55	Dry	1726.82	1726.55	1727.62	1726.59
SE Slough	1735.27	1733.20	1734.52	1735.27	1735.96	1735.92

The dry fall also caused nearly all of the small potholes to dry up. Recreation Slough was one exception. It held good water at freeze-up, apparently as a result of the higher water in South Marsh.

Dike #3 (constructed in July, 1965) was the reason for the higher water in South Marsh. The newly flooded portions were ideal for waterfowl and this area received heavy use.

Again this year there was a considerable seepage of water through all three dikes. Water flowed into Harker Lake, South Marsh, and Lake Isabel through December as a result of this seepage.

2. Food and Cover.

The newly flooded portions of South Marsh contained excellent food (submerged aquatics) and cover for waterfowl. Submerged aquatic foods were also in good supply in Southeast Slough, Headquarters Lakes, and Northwest Slough.

The phragmites stands remained about the same except for some decrease in South Marsh due to higher water. The phragmites are utilized some by ducks for nesting and brood cover but their primary function is to provide cover for upland game and deer.

Small grain production was good (for Slade Refuge) and provided abundant food for all forms of wildlife. Corn was especially good, yielding about 25 bushels per acre. The entire corn crop of 37 acres was left standing in ten strips scattered throughout the refuge. The feeding stations were not used because of the abundance of feed.

In March, a total of 585 bushels of barley and 100 bushels of mixed grain (wheat and barley) were spread on the ice in Headquarters Lakes (300 bu.), South Marsh (200 bu.), Recreation Area Slough (100 bu.), and Harker Lake (85 bu.). The value of this project is unknown but all of the grain was utilized by ducks and a few whistling swans.

Volunteer patches of sweet clover could be found all over the refuge. These patches, plus the rotation strips in the Agricultural Units, provided an abundance of this type of cover.

II. WILDLIFE

A. Migratory Birds.

1. Geese and Swans.

Goose use-days were the highest ever recorded for the refuge, while swan use was the second highest ever recorded. Table Number 2 shows the refuge peak and use-days for geese and swans from 1962 - 1966.

TABLE NUMBER 2

Geese and Swans

Peak Numbers and Total Use-Days

1962 - 1966

Year	Geese		Swans	
	Peak	Use-days	Peak	Use-days
1966	150(F)	2205	140(S)	2730
1965	200(S)	1540	15(S)	224
1964	50(S)	630	170(F)	2905
1963	85(S)	1256	30(S)	745
1962	None		12(S)	126

(F) Fall; (S) Spring

During October a flock of 150 small Canada geese spent two weeks in Harker Lake. They did most of their feeding in A-4, but also fed just off the refuge within two miles of the east boundary.

The first swans (25) were observed on April 12 in Upper Harker. This number increased until the peak of 140 was reached on April 29. They spent most of their time feeding on grain in Headquarters Lakes. Fall swan use was up considerably over 1965 but well below the peak year of 1964.

On October 24 there were 15 adult swans and ten immature on Harker Lake. A check showed there were three pairs with three young each and one pair with one young.

2. Ducks.

The first ducks (30 mallards) were observed on March 15 compared to March 31 last year. Pintails were seen on March 17 and by April 12 all species were present except blue-winged teal, bufflehead, and ruddy ducks.

The peak spring count of 4,470 was reached the week of April 24 - 30. This peak is about 500 below last year, but probably reflects the excellent water conditions in the area.

Table Number 3 illustrates the peak count of common ducks on hand by species during the spring period.

Note: This table has nothing to do with the weekly count.

(See Following Page)

TABLE NUMBER 3

PEAK SPRING POPULATION OF COMMON DUCKS

	1961	1962	1963	1964	1965	1966
Mallard	200	70	180	190	235	370
Gadwall	180	100	110	170	70	200
American widgeon	400	40	90	100	100	150
Pintail	200	40	140	70	185	200
Blue-winged teal	120	120	120	70	60	210
Shoveler	180	60	60	80	20	150
Total Dabblers	1,280	430	700	680	670	1,280
Redhead	400	40	80	1,420	1,870	325
Ring-necked	20		30	10	25	70
Canvasback	220	80	40	530	680	365
Scaup	1,400	300	1,100	1,010	2,040	2,060
Ruddy	40	20	10	80	40	70
Total Divers	2,080	440	1,260	3,050	4,655	2,890
Total Ducks	3,360	870	1,960	3,730	5,325	4,170

Breeding pair counts were made on May 16 - 24 and again on June 7 - 9. This was a very complete count and involved walking out all areas where there was any doubt about observations. All water bodies were numbered for easy identification (see Map #1).

Only three brood counts were possible this year compared to eight in 1965. In spite of this, 27 broods were observed compared to 34 last year. Table Number 4 shows pair and brood data and Table Number 5 estimated production. In the past 12 years, production was higher only in 1958 when it was estimated at 577.

TABLE NUMBER 4

DUCK BREEDING POPULATION AND BROODS

	Pairs		Observed Broods		Estimated Broods	
	1965	1966	1965	1966	1965	1966
Mallard	18	35	7	6	11	15
Gadwall	17	25	8	1	12	12
A. widgeon	3	7	0	1	1	3
Pintail	4	12	0	0	2	4
B.W. teal	22	55	5	6	9	20
Shoveler	10	15	1	1	3	5
Total Dabblers	74	149	21	15	38	59
Redhead	5	15	0	3	1	7
Canvasback	6	15	2	4	3	7
Scaup	11	15	3	4	5	7
Ruddy	20	6	8	1	10	3
Total Divers	42	51	13	12	19	24
TOTALS	116	200	34	27	57	83

TABLE NUMBER 5

ESTIMATED PRODUCTION

	1961	1962	1963	1964	1965	1966
Mallard	26	46	38	50	75	90
Gadwall	50	119	60	30	105	75
A. widgeon	-	11	11	5	10	15
Pintail	19	19	19	30	10	20
B.W. teal	34	122	68	55	60	120
Shoveler	-	19	13	15	20	25
Redhead	6	19	13	10	5	40
Canvasback	-	-	-	20	20	40
Scaup	-	-	-	4	30	40
Ruddy	-	8	7	40	50	15
TOTALS	135	363	229	259	385	480

The peak fall population of 785 was below the 1,895 recorded in 1965 and much below the 9,000 in 1964. Mallards declined only slightly but scaup hit an all-time low. These low numbers caused fall use-days to drop to the lowest in eight years and perhaps the lowest ever recorded. Table Number 6 illustrates use-days by seasons.

TABLE NUMBER 6

DUCK USE-DAYS BY SEASON

	1962	1963	1964	1965	1966
January-April	13,860	39,270	48,545	49,490	54,425
May-August	54,720	47,740	50,113	35,595	86,170
September-December	341,880	50,232	305,389	98,252	41,370
TOTALS	410,460	137,242	404,047	183,337	181,965

3. Coots.

The first coots were observed on April 18, nearly two weeks earlier than last year. The spring peak of 20 was the estimated breeding population. Only one brood was observed but production was estimated at 20, the same as 1965.

The peak fall population of 1,630 set an all-time high. The previous high was 1,400 in 1961. Most of the birds were in Northwest Slough where there was an abundance of submerged aquatics.

4. Water and Marsh Birds.

One great blue heron was seen on April 2, a week earlier than last year. The August 23 peak of 7 compares with eight a year ago. One was still present on November 2.

Pied-billed and eared grebes were numerous again while horned and western grebes were common. No red-necked grebes were observed this year.

Pelicans were up slightly with a peak of 55 on April 25. They used the refuge on and off during the early summer and the last one was seen on August 25. Cormorants were down with only 30 as a peak compared to 121 in 1965. One was still present on October 7.

No sandhill cranes stayed on the refuge this year. Many were observed passing over during the spring and fall migrations. The crane country north of Dawson held good numbers but it is getting harder to get accurate counts as they are scattered over a large territory. This dispersal trend was also noticed in 1965. An aerial count on September 7 showed 3,000 present in the Horsehead and Kunkle Lake areas. A ground count on September 29 upped this to 8,500.

5. Shorebirds, Gulls, and Terns.

Gull numbers remained low all year with Franklin's and ring-billed hitting a peak of 150 while the top number of herring gulls was 60. No gulls were known to have nested here.

Avocet, killdeer, and marbled godwit were numerous and it is believed all three nested. A few willet were present during most of the summer.

6. Mourning Doves.

The first dove was sighted on April 11 and they reached a peak of 135 in August. As in the past several years, most nesting occurred in the Headquarters shelterbelt. It is estimated that 100 young were produced. The last doves (3) were observed on September 29.

B. Upland Game Birds.

1. Ring-necked Pheasant.

The March blizzard nearly eliminated pheasants in this area. It is difficult to see how even one survived. No bird could have lived through it without being in a building, buried under the snow, or in a hay or straw stack.

It is believed the refuge pheasants that survived did so by being buried under snow in dense phragmites. The phragmites filled in with snow but some stands were so dense that there easily could have been air spaces left which the birds utilized.

At any rate, the refuge had about 50 pheasants before the blizzard and 20 after it ended. The writer is happy this is not a pheasant refuge because in three years he watched the population drop from 300 to 20. With this continued good management, they should be eliminated in one more year.

One half-grown brood of 14 was observed in July and total production is estimated at 30. At the end of the year, the population stood at 40.

2. Sharp-tailed Grouse.

Of the upland game birds, grouse were least affected by the blizzard. They spent the time buried in the snow. Sharp-tails have increased over a year ago as a result of a good hatch. Two broods were observed, one of seven and one of nine, with the total production estimated at 30.

The dancing ground was checked on May 5 and six males were counted compared to 12 on April 13, 1965. The reduced number indicates some loss occurred as a result of the blizzard although the count was made too late for a good comparison.

Very little corn was available for the birds from January until seeding but they utilized what there was. The story was different from September through December as corn was abundant and grouse could be found in the fields every day. There is plenty of corn to carry them through the winter.

A count made in late December revealed two flocks of 31 and 34 birds using the corn. The total population is estimated at 80.

3. Gray Partridge.

These small birds came through the blizzard in fair to good shape but they suffered more losses than grouse. They also bury in the snow for protection but, because they like to be near trees and buildings, many of them were buried too deep to get out. Two ranchers reported to me that they found a covey of dead birds in their yard after the snow melted.

In spite of the setback, "Hun" numbers remained about the same as a year ago. One brood of eleven was seen on the refuge and two coveys containing ten and five birds were known to be here at the end of the year. The total population is estimated at 25.

4. Pinnated Grouse.

No "Pinnates" were observed on the refuge or in the surrounding area in 1966.

C. Big Game Animals.

The only big game animal is the white-tailed deer. Their numbers remained about the same as a year ago with a peak of about 25 being reached in the fall. This dropped after the deer season and stood at 10 in December.

D. Fur Animals, Predators, Rodents, and Other Mammals.

1. Fur Animals.

Muskrats are slowly increasing and one house was built in the west portion of South Marsh. This is the first house seen on the refuge in several years. The population is still low and is estimated at 10.

Mink and long-tailed weasel numbers remain low with an estimate of five and eight respectively. One least weasel came into the shop on November 9 for a brief visit. It was last seen heading for the shelterbelt. As far as can be determined, that is the first least weasel sighted on the refuge.

2. Predators.

Raccoon, skunk, and red fox peak numbers are the same as last year at 20, 20, and 12 respectively. During the year, control work eliminated 14 raccoon and 3 skunks.

A female badger with three young was often observed at their den next to the entrance road. All three young were later killed on State Highway 3 just west of the refuge.

3. Rodents and Other Mammals.

Compared to a year ago, jack rabbits declined slightly to 30 while cottontails dropped to 10. The severe drop in cottontails apparently occurred as a result of the blizzard because they were here in good numbers prior to the storm.

Thirteen-lined ground squirrels are numerous, Franklin's are common, and Richardson's are scarce. Pocket gophers are also common.

E. Hawks, Eagles, Owls, Crows, Ravens, and Magpies.

There was a noticeable migration of hawks (mostly red-tailed and rough-legged) on April 12. A marsh hawk was observed on January 13 and at least one was present most of the year. They reached a peak of eight in August. A Cooper's hawk was observed on April 6 in the Headquarters shelterbelt.

An immature bald eagle was seen on February 1, and an adult on March 31. The usual November eagle migration was not observed this year.

There was at least one great horned owl present during the year with a top of four recorded in March and October. No snowy owls were observed during the year. Four short-eared owls were observed on December 8 in G-3.

The first crow was seen on March 12 and they reached a peak of 175 on April 2. No crows were known to have nested on the refuge and nesting crows in this area are very scarce.

No ravens or magpies were present during the year, but it is normal to see at least one magpie.

F. Other Birds.

The small winter birds really took a beating from the March blizzard. There were about 15 English sparrows here before the storm but none were seen for several months afterward.

A northern shrike was observed on January 18 and another on March 29. Small flocks of redpolls were observed several times at Headquarters from January through March.

The first meadowlark was sighted on March 14, followed by ten tree sparrows on the 16th, and two slate-colored juncos on the 30th. April sightings included 50 robins on the 11th, one fox sparrow on the 28th, one myrtle warbler on the 29th, and one white-crowned sparrow on the 30th.

G. Fish.

Fathead minnows and sticklebacks are still abundant but no other fish are present except in Lake Isabel which borders on the refuge.

Harker Lake, the deepest refuge lake, was test netted on June 17 by William Daugherty, the District Fishery Manager from Bismarck. A trawl net was used and no fish were taken.

The maximum depth was seven feet and the surface temperature 67 degrees. The water had a total akalinity of 649.8 PPM and a PH of 10. According to Mr. Daugherty, the lake is too shallow and alkaline for management of sport fish.

H. Reptiles.

Garter snakes, painted turtles, and tiger salamanders continue to be common. Two smooth green snakes were seen at Headquarters and one hog-nosed snake on the entrance road.

The mudpuppies were not in the small waterway that flows between Southeast Slough and Harker Lake. In December, 1965 there were several hundred trying to get to Southeast Slough.

I. Disease.

None noted.

III. REFUGE DEVELOPMENT AND MAINTENANCE

A. Physical Development.

The shed, which is attached to the west side of the barn, was moved about 8" off the foundation because of the March blizzard. This was moved back and cemented in place.

After the March blizzard, large amounts of snow had to be moved before anything else could be done. The boundary fence had to be repaired in several places because of the snow. Many tree branches were broken off and they were picked up and burned.

A landing strip was constructed just southeast of headquarters. The boundary is marked with red and white markers and it is about 2,000' long and 125' wide.

A cattleguard was constructed at the entrance to G-3.

A literature display rack was built for use in the office, and the trim was painted on the service building.

A large number of unserviceable items were sold by sealed bid.

New cabinets and sink were installed in the residence kitchen and the basement floor and living room were painted.

Recreation Area work included: removal of dead and downed trees, the complete overhaul of two outhouses and two change houses, installation of a bulletin board, and the construction of two new picnic tables.

B. Plantings.

1. Aquatic and Marsh Plants.

None.

2. Trees and Shrubs.

Colorado blue spruce (1,500) and eastern red cedar (385) were used to fill in gaps in the shelterbelt parallel to Northwest Slough. In addition, 615 red cedar were used to replace dead trees in the block plantings adjacent to the above shelterbelt. Survival rate on both species appears to be good.

3. Upland Herbaceous Plants.

None.

4. Cultivated Crops.

Wheat and oats yielded about the same as last year, barley was down slightly, while corn production tripled. Yields per acre were: wheat - 11, oats - 34, barley - 21.5, and corn - 25.

A new cooperator (Leland Reichenberg) took over Agricultural Units 1 and 3 and it did not take long to find out that he is a good operator. He is the main reason for the big jump in corn production.

C. Collections and Receipts.

None.

D. Control of Vegetation.

No new patches of leafy spurge were found this year and two of the seven sprayed in 1965 were devoid of spurge plants. The other five were sprayed in June with Tordon and one of these five was re-sprayed in August. The others did not need to be re-sprayed.

No other vegetation control was necessary.

E. Planned Burning.

None.

F. Fires.

None.

IV. RESOURCE MANAGEMENT

A. Grazing.

Seven permits (includes manager's) were issued for the grazing of cattle between the outside dates of May 16 and October 15. Permittees were given a choice of grazing four or five months with no change in total number of AUM's for the season. Four chose the shorter period so as to run more cows with the bull.

The first cattle entered the refuge (G-1 and G-5) on May 16 and the last came out on October 13. A total of 171 head (includes calves) used the refuge at a rate of $1.72 per AUM. All units were in excellent condition at the end of the season.

G-2 and G-3 will remain idle in 1967 to give them a rest. The permittees were informed of this when they received their permit. There is no static here over this type of manipulation because it has been made very clear that this is a wildlife refuge and these changes are beneficial to wildlife. In addition, it keeps the control of the refuge in our hands and not in the permittees.

B. Haying.

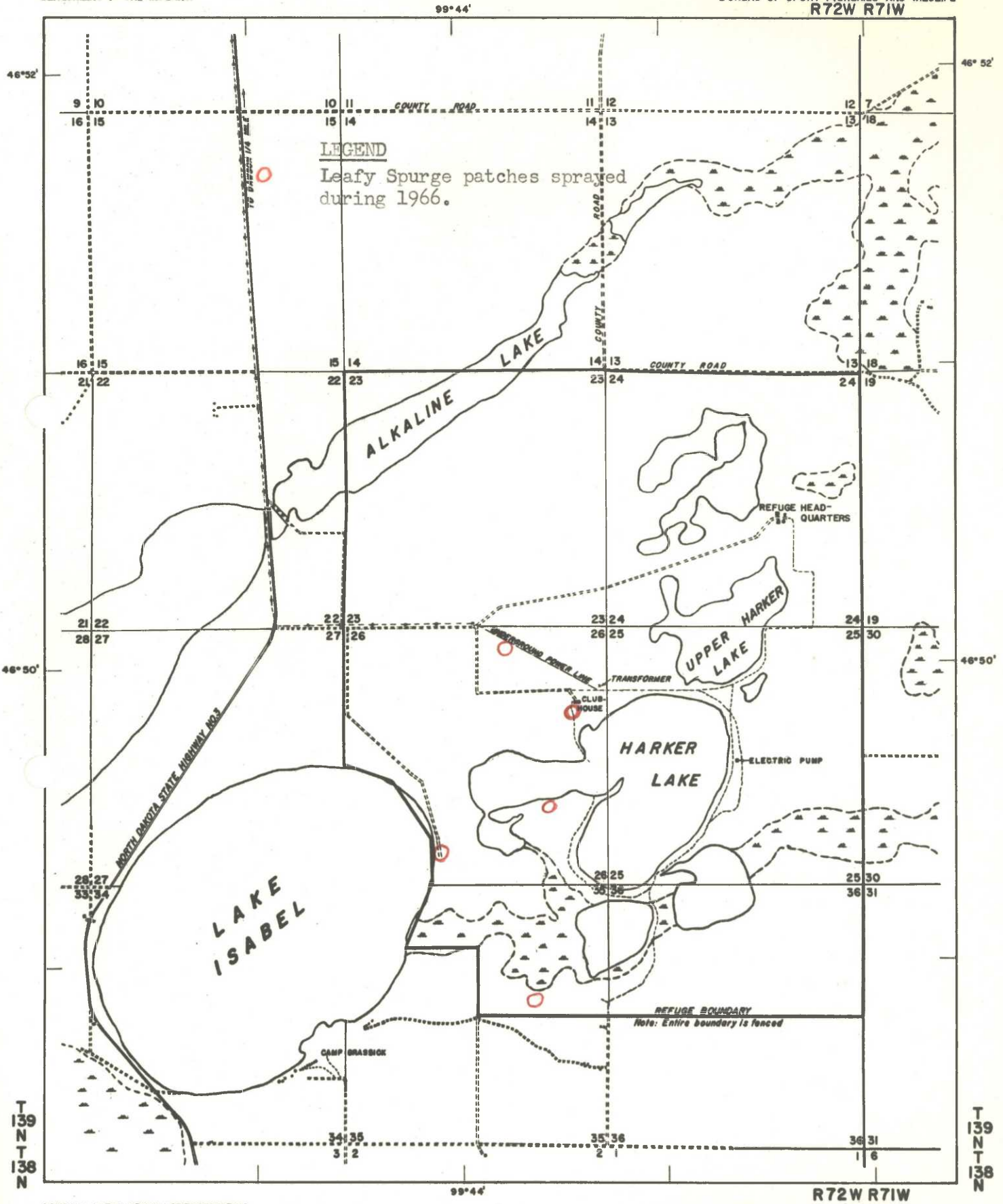
None permitted except along roads and trails and to create small openings. No charge for this as we have trouble finding someone to mow the way we want it done.

SLADE NATIONAL WILDLIFE REFUGE

KIDDER COUNTY, NORTH DAKOTA

UNITED STATES
DEPARTMENT OF THE INTERIOR

FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE



COMPILED IN THE BRANCH OF ENGINEERING

MINNEAPOLIS, MINNESOTA MARCH, 1960

FIFTH PRINCIPAL MERIDIAN

Scale 20 0 20 40 60 CHAINS
1/4 0 1/4 1/2 3/4 MILES

TOWNSHIP DIAGRAM

TRUE NORTH MAGNETIC N.

MEAN DECLINATION 1960

3R N.D. 394 408

C. Fur Harvest.

No trapping permitted because it does not pay. Refuge personnel are able to remove more predators than the trapper did.

D. Timber Removal.

None.

E. Commercial Fishing.

None.

F. Other Uses.

None.

V. FIELD INVESTIGATIONS OR APPLIED RESEARCH

A. Nesting Platform Study.

A total of 37 nesting platforms were available ranging in size from the Dill type to one posters (see photo section). Four mallards nested and hatched for 100% success. The following table shows the type platform, location and number of eggs laid and hatched.

Type Platform	Date Erected	Location	Used by	Eggs Laid	Eggs Hatched
Dill	March 1966	Headquarters Lakes	Mallard	10	9
Dill	"	Upper Harker	Mallard	9	9
Half tractor gas tank	February 1966	Upper Harker	Mallard	9	9
Large metal 4-poster (2" pipe)	March 1966	Headquarters Lakes	Mallard	9	8

The large metal 4-poster in Headquarters Lakes was also used by a mallard in 1965. No other wildlife species are known to have used the platforms for nesting.

B. Pothole Blasting with Ammonium Nitrate.

In October, 1965 two potholes were blasted in the thick vegetative mat east of the open water in Southeast Slough. When the breeding

pair count was made, one of these had a male mallard and a pair of blue-winged teal while the other had no ducks.

In the fall of 1966, an additional 14 potholes were blasted. The following table lists the data on all potholes blasted to date and the map shows the location of each pothole.

The best holes were a result of using 100 lbs. of ANFO mix in six charges. Three of the charges contained about 13 lbs. each and were placed parallel to the shore ten feet apart. The other three charges contained about 20 lbs. and were placed parallel to the first three but further from shore. They were ten feet away from the first charges. This formed a rectangular shape with all charges ten feet apart.

Special PETN 400 Primacord sticks (about 10" long) were placed in the bags of ANFO mix to initiate the charge. Standard-core Primacord was fastened to the PETN sticks and then to a piece of standard-core Primacord that ran through the area between all charges. An electric squibb was fastened to this and connected to wires that ran to a detonating machine. When everything was clear, the charge was set off.

After becoming used to the procedures, two men should be able to blast a hole in about two hours. This includes all the necessary steps. Based on this, the total costs are about $20.00 per pothole.

VI. PUBLIC RELATIONS

A. Recreational Use.

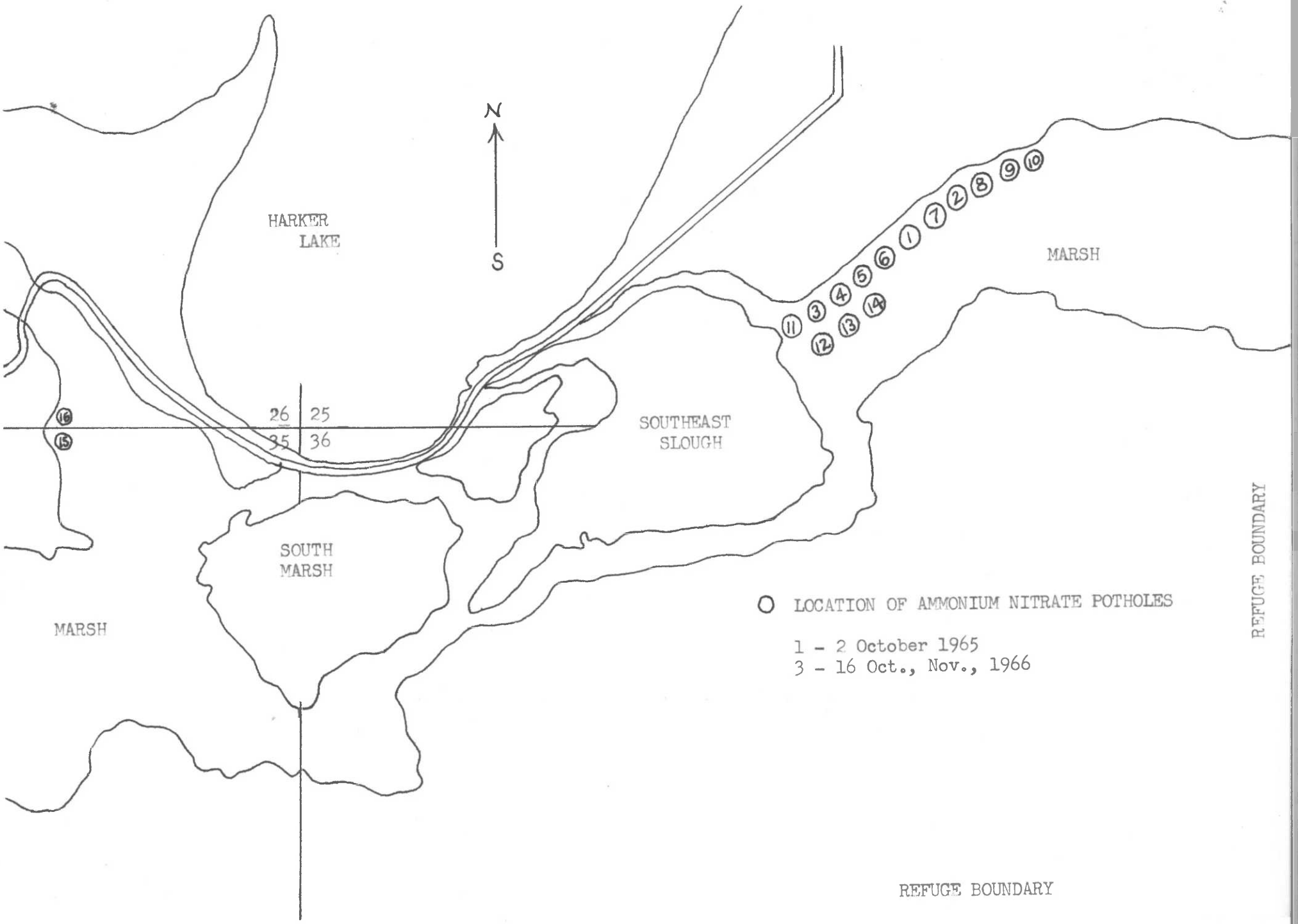
The Lake Isabel Recreation Area was open from May 15 to September 21 for picnicing, swimming, and boat launching. The weather was much nicer than 1965 and visitor-days increased from 13,050 to 17,411. No charge was made for this use but the area has been designated as a fee area for 1967.

The gate at the entrance to the Recreation Area was kept locked at night and it is obvious that most vandalism takes place after dark. The gate was first used in 1965 and since that time very little vandalism has resulted.

POTHOLE BLASTING DATA

Pothole Number	Date	Dimensions*	Max. Depth
1	10/15/65	38' x 28'	Unknown
2	10/15/65	43' x 23'	"
3	10/11/66	42' x 26'	5.0'
4	10/11/66	36' x 32'	5.5'
5	10/11/66	32' x 29'	5.75'
6	10/11/66	43' x 27'	5.5'
7	10/12/66	36' x 35'	6.0'
8	10/12/66	38' x 30'	5.5'
9	10/12/66	24' x 16'	4.5'
10	11/22/66	47' x 22'	4.0'
11	11/22/66	48' x 25'	4.0'
12	11/23/66	38' x 25'	4.0'
13	11/23/66	32' x 25'	4.0'
14	11/23/66	40' x 32'	3.5'
15	11/25/66	39' x 30'	4.0'
16	11/25/66	37' x 28'	5.0'

*Dimensions were taken when potholes were frozen over.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MARSH
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SLOUGH
SOUTH
MARSH
MARSH
26
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36
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16
LOCATION OF AMMONIUM NITRATE POTHOLES
1 - 2 October 1965
3 - 16 Oct., Nov., 1966
REFUGE BOUNDARY
REFUGE BOUNDARY

Temporary repairs were made to the change houses and two toilets but facilities are far from adequate. If fees are to be charged, then parking lots, new toilets, shelters, change houses, fireplaces, a dock, and a new launching ramp will have to be constructed. It will take at least $25,000 to put the area in good shape.

The Slade 4-H Camp was used by the following groups:

Dates	Campers	Number
June 15 - 18	Emmons County	82
June 19 - 22	Kidder County	76
June 22 - 25	McIntosh-Logan Counties	52
June 26 - 29	Morton County	78
July 6 - 9	Burleigh County	90
July 10 - 13	Burleigh County	90
July 13 - 16	Junior Leadership Camp	38
	Total Campers	506

The 4-H Camp Association erected another sleeping quarters building. It is the same as the one constructed in 1965. It houses 12 campers and has only sleeping facilities. They are both set on blocks so the association can move them if they decide to locate someplace else.

B. Refuge Visitors.

Name	Affiliation - Address	Purpose	Date
H. Doty	AAO - Jamestown	WPA's	1/5
L. Werre	Sears Store - Bismarck	Cabinets	2/9
J. Boelter	ND Agency for Surp. Prop.	Surplus Prop.	2/24
M. Syverson	SCS - Steele	Courtesy	4/7
L. Fairfield	Teacher - Steele	Courtesy	4/23
M. Fairfield	Truck Driver - Valley City	Clerk Vacancy	4/23
P. Park	Extension Agent - Steele	4-H Camp	4/28
P. Gilbertson	Lutheran Minister - Steele	Courtesy	4/29
R. Kosanke	Ritzville, Washington	Kosanke WPA	5/2
F. Lee	NPWRC - Jamestown	Goose Project Nesting Pltfms.	5/3
M. Hammond	Biologist, Lower Souris Refuge, Upham	Wildlife Inventory	5/4
W. McClure	USGMA - Bismarck	Dove Surveys	5/10, 24
L. Munson	NPRR - New Rockford, N.D.	Clerk Vacancy	5/11
C. Odin	AAO - Jamestown	Courtesy	5/19

B. Refuge Visitors (Cont'd.).

Name	Affiliation - Address	Purpose	Date
F. Lee	NPWRC - Jamestown	Duck Eggs	5/24, 6/2, 7/1, 7/6
J. Lokemoen	NPWRC - Jamestown	Deliver Duck Starter	5/31
C. Sloan	USGS - Denver, Colo.	Pothole Study	6/1
W. Eisenlohr	USGS - Denver, Colo.	Pothole Study	6/1
W. McClure	USGMA - Bismarck	Violation	6/6
R. Timmerman	Ref. Mgr. - Swan Lake	Courtesy	6/10
W. Rawson	Sheriff - Kidder County	Boating Accident	7/4
C. Nitschke	Deputy Sheriff - Kidder County	" "	7/4
W. Erling	State Warden - Linton	Careless Boating	7/14
C. Sloan	USGS - Denver, Colo.	Install water gauge	7/20
R. Schmidt	Professor, U. of Wisc., Madison, Wisconsin	Courtesy	8/5
R. Stuart	ND Game & Fish - Bismarck	Courtesy	8/11
W. Corwin	Auto Dealer - Bismarck	Courtesy	8/11
I. Sauvageau	Niagara Falls, N. Y.	Courtesy	8/16
H. Irwin & party of 5	Birders - Madison, Wisconsin	Purchase GE passport	8/22
C. Sloan	USGS - Denver, Colo.	Set gauge in well	8/23
D. Holland	USGS - Denver, Colo.	" " "	8/23
M. Syverson	SCS - Steele	Courtesy	8/26
I. Varty	M-man, Jordan Hatchery, Elmira, Michigan	Courtesy	8/29
J. Winship	RO - Pilot-Biologist	Photos, census	9/7
W. McClure	USGMA - Bismarck	Courtesy	9/7
C. Sloan	USGS - Denver, Colo.	Check well gauge	9/13, 10/6, 10/19, 11/3
R. Murdy	NPWRC - Jamestown	Release Birds	9/16
R. Greenwood	NPWRC - Jamestown	Release Birds	9/16
G. Sherwood	NPWRC - Jamestown	Duck Count	10/7
P. Park	Extension Agent - Steele	ANFO Blasting	10/11
W. Moen	SCS - Steele	ANFO Blasting	10/12
M. Syverson	SCS - Steele	ANFO Blasting	10/12
C. Odin	AAO - Jamestown	WPA Tour	10/12
A. Chapman	Bismarck, No. Dak.	Courtesy	10/19
S. Radniecki	Oklee, Minn.	Dugout Const.	10/26
R. Schultz	Merrill, Wisc.	Hunting Info.	11/2
J. Schultz	Merrill, Wisc.	Hunting Info.	11/2

B. Refuge Visitors (Cont'd.).

Name	Affiliation - Address	Purpose	Date
C. Odin	AAO - Jamestown	Courtesy	11/2
M. Hammond	Biologist, Lower Souris Refuge - Upham, N. D.	Breeding Pair Data	12/12
M. Hammond	" " "	Inventory Plans	12/15
M. Syverson	SCS - Steele	Courtesy	12/20
L. Ciucci	AAO - Jamestown	WPA's	Periodic
B. Johnson	AAO - Jamestown	WPA's	Periodic
K. Ystesund	AAO - Jamestown	WPA's	Periodic

C. Refuge Participation.

Date	Organization	Location	Attendance	Activity
1/10	Dawson Homemakers	Dawson	12	Film
2/14	Masonic Lodge	Steele	30	Talk
2/18-19	N.D. Chapter Wildlife Society	Jamestown		Meeting
3/22	Dawson School	Dawson	75	Slide-talk
3/23	Steele School	Steele	395	Slide-talk
5/1	Steele Boy Scouts	Slade Refuge	9	Refuge tour
5/31	Steele Cub Scouts	Slade Refuge	16	Refuge tour
6/1	SCD Board of Suprs.	Napoleon	7	Talk
6/20	Kidder County 4-Her's	Slade Refuge	18	Refuge tour
6/21	Kidder County 4-Her's	Slade Refuge	18	Talk
6/23	Logan-McIntosh 4-Her's	Slade Refuge	60	Slide-talk
6/27	Morton County 4-Her's	Slade Refuge	75	Refuge tour
6/27	Emmons County ASC Committee	Linton	9	Meeting
7/13	Jr. Leadership 4-Her's	Slade Refuge	42	Slide-talk
7/18	Jr. Leadership 4-Her's	Slade Refuge	40	Slide-talk
9/27	Ashley Lion's Club	Ashley	45	Slide-talk
10/6	Napoleon Lion's Club	Napoleon	19	Slide-talk

The January film showing was handled by Ted Schauer while the remainder were handled by Manager Mansfield.

D. Hunting.

The only hunting permitted on the refuge was during the deer gun season which opened at noon November 11 and closed at sunset November 20. An estimated 35 hunters made 65 visits while last year 25 hunters made 40 visits.

There was a snow cover of about 2" when the season opened and this apparently caused the deer to be extra wild. It was difficult to get close to them and the result was only six deer were taken compared to eight last year. Four of them were taken opening week-end. The ages of the deer taken are as follows: Male - $2\frac{1}{2}$, $1\frac{1}{2}$, fawn; Female - $1\frac{1}{2}$, fawn. In addition, one deer was taken of unknown sex and age.

For the second straight year, an experimental teal season was held in this area. The season extended from September 3 through September 11. Hunting pressure was up some over last year but it still was light. There were lots of teal and most hunters had good luck, especially opening week-end.

The sharp-tailed grouse and gray partridge season was open from September 17 to December 18 with a bag and possession limit of four and eight. Hunting pressure was light and it is estimated the kill was about equal to last year.

The goose season was open from October 1 to October 23 from $\frac{1}{2}$ hour before sunrise to noon, and from October 24 through December 12 from $\frac{1}{2}$ hour before sunrise to 2:00 P.M. Hunting pressure appeared to be heavier than the last two years and the kill was up considerably over last year. The following table shows the estimated goose kill for Kidder County:

	1965	1966
Large Canada	5	15
Small Canada	35	205
White-fronted	5	20
Snow-blue	5	10
TOTALS	50	250

The main reason for the increased kill was not more hunters but a larger number of geese. There seemed to be at least one or two flocks of geese on every fair-sized body of water.

The duck season was open from October 8 through November 26 from $\frac{1}{2}$ hour before sunrise to sunset. Hunting pressure increased over 1965 and the kill increased even more, especially on mallards. On November 1, a healthy (appeared to be) blue-winged teal was shot in a marsh just southwest of Dawson.

The pheasant season was not open this year as a result of low numbers. Russ Stuart, State Game and Fish Commissioner, felt it should be open but was afraid many landowners would close their land to all hunting if it was open.

E. Violations.

No apprehensions made.

F. Safety.

Safety meetings were held when possible. The following movies were shown and discussed:

"The Last Mile" "Everything to Lose"
"The Gamblers" "Roll of Drums"

The following subjects were discussed:

"Check Your Clothes Dryer"**
"Winter Hazards"**
"Imuoak - Poison Oak Immunization"*
"Rabies Pre-exposure Program"*
"Recommended Uniform Safety Practice - brush axe"*
"TV Picture Tubes"**
"Save Your Vision"*
"Campers Exercise Caution"*
"Pesticides to be Handled With Caution"*
"Reminder on Carbon Tetrachloride Fire Extinguishers"*
"Helpfulness of Tetanus Shots"**
"Ways of Helping a Drowning Person"**
Excerpts from the USDA Manual for Forest Service Health and Safety Code - mixing and using chemicals and pesticides.
Excerpts from Forrest Carpenter memo on "Making Pets of Wild Animals".
A meeting during "Fire Prevention Week" stressed the use of fire extinguishers.

Safety accomplishments during the year included:

Installation of SMV emblems on the tractor and grader.
Check of all fire extinguishers.
Check of buildings for fire hazards.
Maintained about eight miles of fire breaks.
Installed a tail pipe on Ford truck to keep fumes out of cab.
Installed stair treads on basement steps of residence.
Replaced two hazardous light switches in residence and one in office.

The Safety record now stands at 9,360 days without a "Lost-Time" accident.

* Safety Bulletins ** Family Safety Magazine

VII. OTHER ITEMS

A. Items of Interest.

Our work load and responsibilities took a turn for the worse in July when Long Lake Refuge was assigned to us for management. In the past, it was "fun" attempting to get the work done on Slade, Florence Lake, the Easement Refuges, and the WPA's. Now, with Long Lake added, the "fun" has gone out of it and it is an impossible task.

The paper war has reached a stage where something must be done. We are now responsible for submitting three of most types of reports and plans. For every one that is submitted, two more are staring us in the face. There are two solutions - (1) more manpower, (2) less paper work.

The clerk situation gave us grief all year and had a strong adverse affect on work output. Mr. Henry Hagness was not qualified to be a clerk and he was asked to resign, which he did on June 17. He was followed by Mark Fairfield on August 1, who in turn resigned on December 2. It appeared that he was clerk material but his wife put the heat on and he had to resign.

Mr. Gerald Olson (former Long Lake Refuge Clerk) did not want to transfer to Slade Refuge so he resigned in August. When Mr. Fairfield resigned, Gerald was prevailed upon to return to work under an arrangement whereby he works three days at Slade and two days at Long Lake. This has worked out nicely and the return of Gerald has prevented the manager from losing all his marbles.

Mr. Olson makes difficult tasks look easy and we are well aware of his talents. He has to be recognized as one of the top clerks in the business. We were happy to see him get promoted to a GS-5 on his return.

Mr. Karl Hansen, Wildlife Biologist (GS-5), was added to our staff on August 1, 1966. He resides in the Long Lake Refuge residence with his lovely wife Barbara and two small sons, David and Eric. His former residence was the Round Lake Waterfowl Station at Round Lake, Minnesota. He gained much valuable experience there and on a blue-winged teal project in Iowa.

Karl has had to learn many things the hard way, being stationed more or less on his own. He was immediately given most of the responsibilities for Long Lake, Florence Lake, and the Easement Refuges and WPA's in Burleigh and Emmons Counties. He has done such a good job with these that Logan County has been added. We appreciate having Karl as a part of our crew.

The March blizzard was very severe and the attached letter was sent to the Regional Office to let them know we were all right. We found out afterward they had hoped Slade Refuge blew away. Sorry about that. Letter as follows:

"We have survived the "Blizzard of '66" in good shape, considering the intensity and duration of the storm. It is feared that wildlife (especially pheasants) were not so fortunate, but it is too soon to tell.

The storm started out slowly when snow began falling about noon on March 2nd. Winds were moderate but increased to 40-50* mph by late afternoon. By evening nearly all travel had ceased, and many people were stranded. About 4"* of snow fell.

On March 3rd the wind was between 40-70 mph all day, and about 12" of snow fell. March 4th brought no relief, just grief, when another 8" of snow fell, bringing the total snowfall to 24". Winds were still ranging between 40-70 mph until about midnight, when they decreased somewhat, and it stopped snowing.

The wind still blew 25-35 mph most of March 5th, but no snow fell. The wind decreased in late afternoon, and by evening was down to 5-10 mph.

We were real fortunate that the electricity remained on (except for very short outages) during the worst part of the storm. However, it cut off from about 1:25 a.m. until 6:30 a.m. on March 5th. This was not serious and inside temperatures only dropped to the upper 50's.

During the entire blizzard temperatures never dropped below six degrees above zero. This could be a life saver as far as wildlife is concerned.

The intensity of the storm was unbelievable, and it is feared that many livestock died. I spent most of March 6th working with local people at a farm just north of Dawson. A shed had collapsed killing about 70 sheep and 5 cows. We were able to save about 20 sheep and 4-5 cows. A rancher, whose land joins the refuge on the SE corner, is reported to have lost at least 40 head of range cattle.

The digging out process is underway. We have some drifts which we will not attempt to move. We plan to move only enough to allow movement of vehicles in and out of the headquarters area. The entrance road remained open during the entire storm. Les Dundas did a good job in laying out the road.

Marvin Mansfield

*All wind velocities and snowfall figures are estimates."

B. Credits.

Clerk Olson worked up the data in the Weather Table and for Refuge Visitors, and typed the entire report. Karl Hansen wrote the section on Florence Lake Refuge. The manager prepared the rest of the report.

C. Photographs.

All photographs, except those taken by Messrs. Winship and Hansen, were taken with the refuge Kodak Signet (35 mm) camera.

FLORENCE LAKE NATIONAL WILDLIFE REFUGE

I. GENERAL

The March blizzard left a heavy snow accumulation that resulted in an excellent run-off into all refuge potholes. Most water areas were full by the time migrant ducks began to arrive.

A culvert at the south end of Florence Lake is used for measuring water levels. The measurements taken here give some indication of general water conditions throughout the refuge.

On March 25 the water was 8" deep in the culvert. This represented an increase of 6" over the freeze-up measurement recorded in 1965. By April 20, water was flowing north and west into the complex of marshes and potholes. On August 10 the water level had dropped even with the bottom of the culvert. At freeze-up in early November, lake level was 5" below the culvert. From spring break-up to fall freeze-up, a loss of 13" had taken place.

All potholes on the refuge maintained fair to good water levels throughout the year. The large pothole south of Florence Lake and another large pothole west of the old farmstead received the heaviest duck use.

Food and cover conditions benefited a variety of wildlife observed during refuge inspections.

II. WILDLIFE

A. Waterfowl.

The following waterfowl counts were made during the year:

	4/20	8/30	9/30	10/18
Mallard	9	90	950	910
Gadwall		245	85	115
A. widgeon	4	10	30	65
Pintail	13	90	525	355
G. W. teal	9	15	30	65
B. W. teal		19	20	
Shoveler	16	45	10	35
Black*			1	
Total Dabblers	51	514	1,651	1,545

	4/20	8/30	9/30	10/18
Redhead	33	1	35	25
Ringneck		1	3	
Canvasback	42		35	80
Lesser Scaup	132		2	
Ruddy	2		30	15
C. goldeneye	16			
A. merganser	14			
Total Divers	239	2	105	120
Total Ducks	290	516	1,756	1,665
Coots		380	265	

*Rarely seen

An extensive breeding pair count was conducted on June 8 and 10. The June 8 count was done by Merrill Hammond and the manager. The group of three potholes north and west of the old building site were counted with the Cat-a-gator (see photo section). On that date, the potholes in the section northeast of the buildings were counted on foot by Messrs. Mansfield and Hammond. The remaining water areas were counted by the manager on June 10. A summary of the complete count is as follows: (Pairs and lone males were tabulated for the total pairs figure)

	Breeding Pairs	Per Cent Species Composition
Mallard	18	6.7
Gadwall	31	11.6
G. W. teal	2	.8
B. W. teal	147	55.0
Shoveler	16	5.9
Pintail	19	7.1
Redhead	9	3.4
Canvasback	5	1.9
Lesser scaup	5	1.9
Ruddy	15	5.7
Total Pairs	265	100.0%
Coot	71	

No significant brood data were obtained.

Total duck production based on the pair count would be estimated at 655. This represents a substantial increase over 1965 when production was estimated at 265.

No coot broods were observed but a total of 18 nests were located during the breeding pair count. Production for this species is estimated at 210.

B. Upland Game Birds.

Sharp-tailed grouse were observed on two occasions: March 25 (9), and October 18 (2). No gray partridge or pheasants were seen. Peak populations would be estimated the same as last year for sharp-tails (35) and "Huns" (10), while pheasants were apparently wiped out by the blizzard.

C. Other Birds.

Among the water birds, black-crowned night herons and great blue herons were seen on several inspection trips. Pied-billed grebes were common with a peak of 41 counted on September 30. Casual observations were made on the eared and western grebe, double-crested cormorant, and white pelican. Several sora rails and, to a lesser extent, Virginia rails were noted during the breeding pair count.

The marsh hawk was the most common prey species seen. One red-tailed hawk was recorded at the abandoned farm site. Two species of owls were recorded, the great-horned and the short-eared.

D. Big Game Animals.

Peak white-tailed deer numbers are down slightly from the estimated 35 of a year ago. The peak number observed was 20 animals on November 18, down slightly from the 25 recorded in April 1965.

E. Predators.

Red fox, skunk, and raccoon are observed occasionally. As far as can be determined, the predator population has not changed over the past year. Peak populations are estimated at 4, 10, and 10 respectively.

III. REFUGE DEVELOPMENT AND MAINTENANCE

A. Physical Development.

Five nesting platforms were erected on March 1. Four of the square, wooden structures are held up by two steel posts driven through the ice into the marsh bottom. The remaining platform is made of steel with four posts attached. This particular design was left sitting on the ice. With the melting of ice, the platform structure settled into place. All nesting material in the platform consisted of brome grass at the bottom, followed by oats straw with cattail or bulrush on top. Three of the platforms were knocked over by ice and the remaining two were not used for nesting.

New signs and posts were replaced as needed along the refuge boundary.

B. Plantings.

A Cooperative Farming Agreement was issued to Dan Yecovenko to plant 29.4 acres of wheat, 7.8 acres of corn, and 10.0 acres of flax. The refuge share of wheat (5.0) and all of the corn was left standing. The yields for wheat, corn, and flax were estimated at 20, 5, and 5 bushels per acre respectively.

IV. RESOURCE MANAGEMENT

A. Grazing.

Grazing permits were issued to Harris Crimmins (G-1) and Charles Giedd (G-2). The permit for G-1 extended from June 1 to October 31 for a maximum of 225 AUM's. The permit for G-2 extended from June 1 to September 30 for a maximum of 130 AUM's.

Mr. Crimmins utilized 215.36 AUM's for which he paid $370.42 while Mr. Giedd utilized 124.07 AUM's and he paid $213.40.

Both units were in excellent condition at the end of the grazing season. Unit G-1 was grazed light to moderately in spots. Unit G-2 appeared to have been lightly grazed throughout. The AUM's will remain the same for 1967 due to their overall condition.

V. ITEMS OF INTEREST

On September 1 (in the evening) we received a call from Joseph Bernhard, a refuge neighbor, that ducks were eating his swathed grain. Manager Mansfield spent the next morning at the farm but less than 200 ducks came. There was some light damage but nothing to call us about. The farmer had never had any ducks on swaths before and he got excited. The grain was picked up right away and no more trouble resulted.

EASEMENT REFUGE DISTRICT #1

Appert Lake.

Water conditions improved over 1965 but still can be classified as only fair. The following table shows wildlife observed during inspection trips.

	9/2	9/8	10/4	10/27
Mallard	6		57	
Gadwall		2	5	
Pintail			6	
B.W. teal		16	16	
G.W. teal			3	13
Shoveler	1		9	
Coot	5	2		
P.B. grebe	2	2	2	
Eared grebe		1		
G.B. heron	2			
Franklin's gull		2,500		

On september 2, one sign and post was replaced on the east boundary and two signs on the north boundary.

This area continues to look bad as a refuge and it is felt that we are making a mistake keeping the area. It definitely hurts the refuge image.

Canfield Lake.

The water situation and waterfowl use were much improved over 1965 and at freeze-up the area still held good water. It was completely frozen over when checked on November 18.

The following birds were observed during inspection trips.

	8/30	9/30	10/18
Mallard		75	1,500
Gadwall		150	500
Pintail		100	750
B.W. teal	Many	6	25
G.W. teal		30	150
A. widgeon			150
Shoveler		28	200
Coot	Many	450	

The area is hard to census because of the dense stands of emergents (mainly hardstem bulrush). On August 10, it was noticed that many young coots were present and it is estimated that 200 were produced. on that date, a IC brood of nine gadwall was seen.

On August 31, a total of four new signs and posts were installed and three others were relocated.

Flickertail.

The spillway is washed out so the area holds only about five acres when full. It is presumed a large volume of water passed through the spillway in the spring. It was not inspected until September 9 when six posts and four signs were replaced. No waterfowl were observed.

This area has a good potential for duck production but it cannot be realized until the spillway is repaired. The job will require concrete to stand up under a normal run-off.

Hutchinson.

The following counts were made:

	8/31		9/30
Mallard	1,150	Mallard	110
Ruddy	5	Widgeon	9
Coot	425	Canvasback	65
B.C. night heron	15	Bufflehead	2
G.B. heron	2	Coot	25

In addition, on September 30 there were 275 sandhill cranes and 66 white-fronted geese observed. On August 31 seven posts and signs were replaced. The area still had good water at freeze-up.

Lake George.

This refuge had good water throughout the year. The spillway in the north unit is still washed out and cannot be repaired until funds are available. Apparently, it will take a concrete spillway to stand up during the run-off period.

On September 1, eight signs and posts were replaced. On that date, there were 500 ducks, mostly mallards, pintail, and gadwall, on the main lake. None were on the south unit on November 4 since it was iced over, while the main lake had 30 redheads, 35 buffleheads, and 2 mallards.

Lost Lake.

This area was visited on August 29 when one sign and post was replaced. Water was going over the spillway ½" deep. On that date, there were 35 mallards, 2 widgeon, and 32 coots.

For some unknown reason, this area continues to be assigned to this district but it should be administered from the Snake Creek Refuge.

Springwater.

This is another area that should not be a National Wildlife Refuge. It has good water but very few waterfowl. On September 2, two signs and one post were replaced. On that date, no waterfowl were observed and the water flowing into the drop culvert was ½" deep.

Sunburst.

Water was flowing over the spillway 6" deep on March 15. No waterfowl were present. On April 28, water was still flowing over the spillway but the flow was down to ½". By May 23, the flow was reduced to a trickle.

The spillway stood up under the flow but it is just a question of time until it gives way. It will take a lot of money to fix it right but the expenditure of a large sum is debatable due to the low waterfowl use.

SIGNATURE PAGE

Submitted by:

Marvin Mansfield
(Signature)
Marvin Mansfield
Refuge Manager

Date: March 2, 1967

Title

Approved, Regional Office:

Date: 3-6-67

(Signature)

Regional Refuge Supervisor

3-1750
Form NR-1
(Rev. March 1953)

WATERFOWL

REFUGE Slade

MONTHS OF September TO December, 19 66

(1) Species	(2) Weeks of reporting period: 9/4-10 (1)	9/11-17 (2)	9/18-24 (3)	9/25-10/1 (4)	10/2-8 (5)	10/9-15 (6)	10/16-22 (7)	10/23-29 (8)	10/30-11/5 (9)	10/5-12 (10)
Swans:										
Whistling								35	105	
Trumpeter										
Geese:										
Canada, small				150	150					
Cackling										
Brant										
White-fronted										
Snow										
Blue										
Other										
Ducks:										
Mallard	100	140	160	180	170	240	310	320	500	200
Black										
Gadwall	70	70	90	90	20	30	30	50		
Baldpate	80	120	120	130	10	20	40	40	10	
Pintail	40	50	70	80	90	80	30	20		
Green-winged teal	30	40	40	50	20	20	10	10		
Blue-winged teal	240	190	160	130	70	60	20	10		
Cinnamon teal										
Shoveler	20	30	20	20	20	30	30	20		
Wood										
Redhead	10	10	20	10	30	30	40	40	10	
Ring-necked			5	5	5	5				
Canvasback	20	10	30	5	5	10	20	20	10	
Scaup	20	20	30	30	10	30	40	40	10	
Goldeneye										
Bufflehead			10	15	10	20	30	40	5	
Ruddy	10	20	30	30	10					
Other Hooded Merganser					2		2	4	2	
Coot:	180	480	720	1630	660	540	260	120		

Int. Dup. Sec., Wash., D.C. 37944

3 -1750a
Cont. NR-1
(Rev. March 1953)

WATERFOWL
(Continuation Sheet)

REFUGE Slade MONTHS OF September TO December, 1966

(1) Species	(2) Weeks of reporting period: 11 (11/13-19)	12 (11/20-26)	13 (11/27-12/3)	14 (12/4-10)	15 (12/11-17)	16 (12/18-24)	17 (12/25-31)	18	(3) Estimated waterfowl days use	(4) Production: Broods seen	Estimated total
Swans:											
Whistling									980		
Trumpeter											
Geese:											
Canada, small									2,100		
Cackling											
Brant											
White-fronted											
Snow											
Blue											
Other											
Ducks:											
Mallard									16,240		
Black											
Gadwall									3,150		
Baldpate									3,990		
Pintail									3,220		
Green-winged teal									1,540		
Blue-winged teal									6,160		
Cinnamon teal											
Shoveler									1,330		
Wood											
Redhead									1,400		
Ring-necked									140		
Canvasback									910		
Scaup									1,610		
Goldeneye											
Bufflehead									910		
Ruddy									700		
Other											
Hooded Merganser									70		
Coot:									32,130		

(over)

	(5) Total Days Use	(6) Peak Number	(7) Total Production
Swans	980	105	
Geese	2,100	150	
Ducks	41,370	785	
Coots	32,130	1630	

SUMMARY

Principal feeding areas Northwest and Southeast Sloughs, and South Marsh for divers. A-4 and A-5 for dabblers.

Principal nesting areas

Reported by Marvin Mansfield, Refuge Manager

INSTRUCTIONS (See Secs. 7531 through 7534, Wildlife Refuges Field Manual)

(1) Species: In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and national significance.

(2) Weeks of Reporting Period: Estimated average refuge populations.

(3) Estimated Waterfowl Days Use: Average weekly populations x number of days present for each species.

(4) Production: Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.

(5) Total Days Use: A summary of data recorded under (3).

(6) Peak Number: - Maximum number of waterfowl present on refuge during any census of reporting period.

(7) Total Production: A summary of data recorded under (4).

Interior Duplicating Section, Washington, D. C.
1953

16242

3-1751
Form NR-1A
(Nov. 1945)

MIGRATORY BIRDS
(other than waterfowl)

Refuge Slade Months of September to December 1966

(1) Species	(2) First Seen		(3) Peak Numbers		(4) Last Seen		(5) Production			(6) Total
Common Name	Number	Date	Number	Date	Number	Date	Number Colonies	Total # Nests	Total Young	Estimated Number
I. Water and Marsh Birds:										
Eared grebe					2	9/15				10
Western grebe					1	11/6				30
Pied-billed grebe					2	10/24				50
Double-crested cormorant					1	10/7				50
Great blue heron					1	11/2				15
American bittern					1	10/24				10
Sandhill crane *			8,500	9/29	25	11/8				15,000
II. Shorebirds, Gulls and Terns:										
Wilson's snipe					2	10/21				15
Herring gull					4	9/24				25
Ring-billed gull					8	9/21				35
Franklin's gull					25	9/24				60
Common tern					6	9/27				20

* Horsehead and Kunkle Lake areas.

(over)

(1)	(2)	(3)	(4)	(5)	(6)
III. Doves and Pigeons:					
Mourning dove		3	9/29		75
White-winged dove					
IV. Predaceous Birds:					
Golden eagle					
Duck hawk					
Horned owl		2 - 4	present throughout period		5
Magpie					
Raven					
Crow					
Red-tailed hawk		1	9/23		6
Rough-legged hawk		1	9/16		5
Marsh hawk		1	10/28		15
Sparrow hawk		3	9/14		10
Short-eared owl		4	12/8		10

Reported by Marvin Mansfield

INSTRUCTIONS

(1) Species: Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. order. Avoid general terms as "seagull", "tern", etc. In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. Groups: I. Water and Marsh Birds (Gaviiformes to Ciconiiformes and Gruiiformes)
II. Shorebirds, Gulls and Terns (Charadriiformes)
III. Doves and Pigeons (Columbiformes)
IV. Predaceous Birds (Falconiformes, Strigiformes and predaceous Passeriformes)

(2) First Seen: The first refuge record for the species for the season concerned.

(3) Peak Numbers: The greatest number of the species present in a limited interval of time.

(4) Last Seen: The last refuge record for the species during the season concerned.

(5) Production: Estimated number of young produced based on observations and actual counts.

(6) Total: Estimated total number of the species using the refuge during the period concerned.

3-1752
Form NR-2
(April 1946)

UPLAND GAME BIRDS

1613

Refuge Slade Months of September to December, 1966

(1) Species	(2) Density		(3) Young Produced		(4) Sex Ratio	(5) Removals			(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat	Acres per Bird	Number broods obs'v'd.	Estimated Total	Percentage	Hunting	For Re-stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Ring-necked pheasant	Crop - 315 Ac. Grass and Marsh - 2,085 Ac.	60			50:50				40	
Sharp-tailed grouse	" " "	30			50:50				80	
Gray partridge	" " "	96			50:50				25	

INSTRUCTIONS

Form NR-2 - UPLAND GAME BIRDS.*

(1) SPECIES: Use correct common name.

(2) DENSITY: Applies particularly to those species considered in removal programs (public hunts, etc.). Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.

(3) YOUNG PRODUCED: Estimated number of young produced, based upon observations and actual counts in representative breeding habitat.

(4) SEX RATIO: This column applies primarily to wild turkey, pheasants, etc. Include data on other species if available.

(5) REMOVALS: Indicate total number in each category removed during the report period.

(6) TOTAL: Estimated total number using the refuge during the report period. This may include resident birds plus those migrating into the refuge during certain seasons.

(7) REMARKS: Indicate method used to determine population and area covered in survey. Also include other pertinent information not specifically requested.

* Only columns applicable to the period covered should be used.

3-1753
Form NR-3
(June 1945)

BIG GAME

Refuge Slade Calendar Year 1966

(1) * Species	(2) Density	(3) Young Produced	(4) Removals				(5) Losses			(6) Introductions		(7) Estimated Total Refuge Population		(8) Sex Ratio
Common Name	Cover types, total Acreage of Habitat	Number	Hunting	For Re-stocking	Sold	For Research	Predation	Disease	Winter Loss	Number	Source	At period of Greatest use	As of Dec. 31	
White-tailed deer	Crop - 300 Ac., grass and marsh 2,100 Ac., trees and brush 50 Ac.	12	6									25	10	1:4

Remarks:

Reported by _____

INSTRUCTIONS

Form NR-3 - BIG GAME

(1) SPECIES: Use correct common name; i.e., Mule deer, black-tailed deer, white-tailed deer. It is unnecessary to indicate sub-species such as northern or Louisiana white-tailed deer.

(2) DENSITY: Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.

(3) YOUNG PRODUCED: Estimated total number of young produced on refuge.

(4) REMOVALS: Indicate total number in each category removed during the year.

(5) LOSSES: On the basis of known records or reliable estimates indicate total losses in each category during the year.

(6) INTRODUCTIONS: Indicate the number and refuge or agency from which stock was secured.

(7) TOTAL REFUGE POPULATION: Give the estimated population of <u>each</u> <u>species</u> on the refuge at period of its greatest abundance and also as of Dec. 31.

(8) SEX RATIO: Indicate the percentage of males and females of each species as determined from field observations or through removals.

116008

Form NR-5 DISEASE 1616

Refuge Slade Year 1966

Botulism NONE

Lead Poisoning or other Disease NONE

Period of outbreak

Period of heaviest losses

Losses:

	Actual Count	Estimated
(a) Waterfowl		
(b) Shorebirds		
(c) Other		

Number Hospitalized	No. Recovered	% Recovered
(a) Waterfowl		
(b) Shorebirds		
(c) Other		

Areas affected (location and approximate acreage)

Water conditions (average depth of water in sickness areas, reflooding of exposed flats, etc.

Condition of vegetation and invertebrate life

Remarks

Kind of disease

Species affected

Number Affected

Species	Actual Count	Estimated

Number Recovered

Number lost

Source of infection

Water conditions

Food conditions

Remarks

NR-6

Bureau of Sport Fisheries and Wildlife

PUBLIC RELATIONS

(See Instructions on Reverse Side)

Refuge Slade Calendar Year 1966

1. Visits

a. Hunting 65 b. Fishing 300 c. Miscellaneous 17,411 d. TOTAL VISITS 17,776

1a. Hunting (on refuge lands)

TYPE	HUNTERS	ACRES	MANAGED BY
Waterfowl			
Upland Game			
Big Game	35	2,840	Refuge
Other			

Number of permanent blinds

Man-days of bow hunting included above

Estimated man-days of hunting on lands adjacent to refuge 800

1b. Fishing (area open to fishing on refuge lands)

TYPE OF AREA	ACRES	MILES
Ponds or Lakes		
~~Streams and~~ Shores (Lake Isabel)		1

1c. Miscellaneous Visits

Recreation 17,411 Official 30

Economic Use 60 Industrial ---

2. Refuge Participation (groups)

TYPE OF ORGANIZATION	On Refuge NO. OF GROUPS	On Refuge NUMBER IN GROUPS	Off Refuge NO. OF GROUPS	Off Refuge NUMBER IN GROUPS
Sportsmen Clubs				
Bird and Garden Clubs				
Schools			2	470
Service Clubs			4	106
Youth Groups	9	290		
Professional-Scientific				
Religious Groups				
State or Federal Govt.			2	16
Other				

3. Other Activities

TYPE	NUMBER	TYPE	NUMBER
Press Releases	6	Radio Presentations	
Newspapers (P.R.'s sent to)	5	Exhibits	
TV Presentations		Est. Exhibit Viewers	

3-1756
(Rev. 4/63)

Form NR-7

PLANTINGS
(Marsh - Aquatic - Upland)

Refuge Slade Year 1966

Species	Location of Area Planted	Rate of Seeding or Planting	Amount Planted (Acres or Yards of Shoreline)	Amount & Nature of Propagules	Date of Planting	Survival	Cause of Loss	Remarks
Sweet clover	A-3	10#/A.	7		April	Good		
Sweet clover	A-4	10#/A.	10		April	Good		
Sweet clover	A-5	10#/A.	6		April	Good		
Colorado blue spruce	NW Slough Shelterbelt	750/A.	2		April	90%		
Eastern red cedar	A-1	650/A.	1		April	85%		
Eastern red cedar	NW Slough Shelterbelt	750/A.	0.5		April	85%		

TOTAL ACREAGE PLANTED:

Marsh and aquatic _____
Hedgerows, cover patches 23
Food strips, food patches _____
Forest plantings 3.5

1618

3-1758
Form NR-8
(Rev. Jan. 1956)

Fish and Wildlife Service Branch of Wildlife Refuges

CULTIVATED CROPS - HAYING - GRAZING

Refuge Slade County Kidder State North Dakota

Cultivated Crops Grown	Permittee's Share Harvested		Government's Share or Return				Total Acreage Planted	Green Manure, Cover and Waterfowl Browsing Crops Type and Kind	Total Acreage
			Harvested		Unharvested				
	Acres	Bu./Tons	Acres	Bu./Tons	Acres	Bu./Tons			
Wheat	136	1500			6	66	142	Alfalfa	67
Barley			15.4	330			15.4	Sweet Clover	25
Oats	34.5	1200					34.5		
Corn					37.1	927	37.1		
								Fallow Ag. Land	6

No. of Permittees: Agricultural Operations 3 Haying Operations -- Grazing Operations 7

Hay - Improved (Specify Kind)	Tons Harvested	Acres	Cash Revenue	GRAZING	Number Animals	AUM'S	Cash Revenue	ACREAGE
				1. Cattle	171	436.10	$ 750.08	832
				2. Other				
				1. Total Refuge Acreage Under Cultivation				327
Hay - Wild				2. Acreage Cultivated as Service Operation				None

DIRECTIONS FOR PREPARING FORM NR-8
CULTIVATED CROPS - HAYING - GRAZING

Report Form NR-8 should be prepared on a calendar-year basis for all crops which were planted during the calendar year and for haying and grazing operations carried on during the same period.

Separate reports shall be furnished for Refuge lands in each county when a refuge is located in more than one county or State.

Cultivated Crops Grown - List all crops planted, grown and harvested on the refuge during the reporting period regardless of purpose. Crops in kind which have been planted by more than one permittee or this Service shall be combined for reporting purposes.

Permittee's Share - Only the number of acres utilized by the permittee for his own benefit should be shown under the Acres column, and only the number of bushels of farm crops harvested by the permittee for himself should be shown under the Bushels Harvested column. Report all crops harvested in bushels or fractions thereof except such crops as silage, watermelons, cotton, tobacco, and hay, which should be reported in tons or fractions thereof.

Government's Share or Return - Harvested - Show the acreage and number of bushels harvested for the Government of crops produced by permittees or refuge personnel. Unharvested - Show the exact acreage and the estimated number of bushels of grain available for wildlife. If grazing is made available to waterfowl through the planting of grain, cover, green manure, grazing or hay crops, estimate the tonnage of green food produced or utilized and report under Bushels Unharvested column.

Total Acreage Planted - Report all acreage planted, including crop failures.

Green Manure, Cover and Waterfowl Grazing Crops - Specify the acreage, kind and purpose of the crop. These crops and the acreage may be duplicated under cultivated crops if planted during the year, or a duplication may occur under hay if the crop results from a perennial planting.

Hay - Improved - List separately the kinds of improved hay grown. Annual plantings should also be reported under Cultivated Crops, and perennial hay should be listed in the same manner at time of planting.

Total Refuge Acreage Under Cultivation - Report total land area devoted to agricultural purposes during the year.

INT.-DUP. SEC., WASH., D.C. 91767

3-1570
NR-8a

REFUGE GRAIN REPORT

Refuge Slade Months of January thru December 1966

(1) VARIETY	(2) ON HAND BEGINNING OF PERIOD	(3) RECEIVED DURING PERIOD	(4) TOTAL	(5) GRAIN DISPOSED OF				(6) ON HAND END OF PERIOD	(7) PROPOSED USE		
				TRANS-FERRED	SEEDED	FED	TOTAL		SEED	FEED	SURP.
Barley	450	320	770			455	455	315		315	
Mixed	100		100			100	100	0			

(8) Indicate shipping or collection points

(9) Grain is stored at Slade Refuge

(10) Remarks

NR-8a REFUGE GRAIN REPORT

This report should cover all grain on hand, received, or disposed of, during the period covered by this narrative report.

Report all grain in bushels. For the purpose of this report the following approximate weights of grain shall be considered equivalent to a bushel: Corn (shelled)—55 lbs., Corn (ear)—70 lbs., Wheat—60 lbs., Barley—50 lbs., Rye—55 lbs., Oats—30 lbs., Soy Beans—60 lbs., Millet—50 lbs., Cowpeas—60 lbs., and Mixed—50 lbs. In computing volume of granaries, multiply the cubic contents (cu. ft.) by 0.8 bushels.

(1) List each type of grain separately: Corn, wheat, proso millet, etc. Include only domestic grains; aquatic and other seeds will be listed on NR-9.

(3) Report all grain received during period from all sources, such as transfer, share-cropping, or harvest from food patches.

(4) A total of Columns 2 and 3.

(6) Column 4 less Column 5.

(7) This is a proposed breakdown by varieties of grain listed in Column 6.

(8) Nearest railroad station for shipping and receiving.

(9) Where stored on refuge: "Headquarters grainary", etc.

(10) Indicate here the source of grain shipped in, destination of grain transferred, data on condition of grain, unusual uses proposed.

3-1979 (NR-12)
(9/63)

Bureau of Sport Fisheries and Wildlife

ANNUAL REPORT OF PERSTICIDE APPLICATION

Refuge: Slade

Proposal Number:

Reporting Year: 1966

INSTRUCTIONS: Wildlife Refuges Manual, secs. 3252d, 3394b and 3395.

Date(s) of Application	List of Target Pest(s)	Location of Area Treated	Total Acres Treated	Chemical(s) Used	Total Amount of Chemical Applied	Application Rate	Carrier and Rate	Method of Application
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
6/5	Leafy spurge	Five scattered patches ranging in size from 9 to 1,000 sq. ft.	0.1	Tordon	1 pint	2.5 lbs./A.	Water 50 gal./A.	Hand Pump
8/23	Leafy spurge	1 patch - 400 sq. ft.	0.01	Tordon	0.1 pint	2.5 lbs./A.	Water 50 gal./A.	Hand Pump

10. Summary of results (continue on reverse side, if necessary)

(a) First years results:

1. Date and amount of first rainfall. — 6/10 .02"
2. Date of first observation. — 6/17
3. Date of first effects noted. — 6/17
4. Character of symptoms. — Plants brownish.
5. Date of examination & percent of apparent kill. — 7/19 100%
6. Date of follow-up observation & percent of regrowth — 8/23 None
7. Date of examination & percent of real kill. — 8/23 100%
8. Cost of chemical, equip., labor: total & per acre cost. — $15.00; $3.75; $31.00 -- Total $49.75 or $497.00 per acre

35500

Emmons County Record

Read By Over **2,800** Families Every Week

Official County and Linton City Newspaper

WEATHER FOR THE WEEK

	H	L	P
Wed., Nov. 2	35	4	
Thurs., Nov. 3	48	8	trace
Fri., Nov. 4	33	12	.02
Sat., Nov. 5	40	0	
Sun., Nov. 6	40	22	
Mon., Nov. 7	30	10	.02
Tues., Nov. 8	18	6	.11

Eighty-third Year—Number 22 Linton, North Dakota 58552 Wednesday, Nov. 9, 1966 $4.00 and $5.00 Per Year. Single Copy 10c

Republicans Sweep State, 31st District

2 Refuges to Open For Deer Hunting

Long Lake and Slade National Wildlife Refuges will be open to deer gun hunting again this year, reports Marvin Mansfield. They will be open from 12 noon on Friday, Nov. 11, to sunset on Sunday, Nov. 20.

Two areas will be closed to hunting on Long Lake Refuge. These will be marked with "Closed Area" signs. No vehicles will be allowed on this refuge, except to pick up dead deer.

Long Lake Refuge is in southeastern Burleigh and southwestern Kidder Counties. Slade Refuge is located two miles south and two miles east of Dawson.

Long Lake Refuge Clerk Given Citation

Dawson—Gerald Olson, clerk at Long Lake National Wildlife Refugee, received a cash Superior Performance Award in ceremonies at refuge headquarters. The award was presented by Refuge Manager Marvin Mansfield on July 8th. Awards of this type are made possible under the Incentive Awards Program, which recognizes special efforts on the part of employees.

Mr. Olson was cited for his outstanding performance during the past year. He has served as acting manager since February 5, 1966, during which time he handled the work load in his usual prompt and efficient manner.

His ability to handle an emergency was demonstrated after the March blizzard, when 10-20 foot drifts buried refuge headquarters. His judgment and quick action in supervising the "digging out" project held damage to a minimum. It is a real pleasure to present a man of this calibre an outstanding performance award.

— o O o —

Steele Ozone, Steele, No. Dak. 7/14/66

5-12-66

THE STEELE OZONE-PRESS, INC., STEELE, N. DAK.

Steele Scouts Guests at Slade Refuge

The Steele Boy Scout troop were guests of Marv Mansfield at the U. S. Wildlife Refuge at Dawson, May 1st. Accompanying the boys were Scoutmaster Mel Diers and assistant Ed Teske, Jr. Pictured left to right are: Paul Svingen, Marv Mansfield, Greg Hauck, Tim Hockhalter, Tim Mullen, Wendall Nelson, Mel Diers, Ronny Teske and Peter Svingen.

The boys toured the refuge and Refuge Manager Mansfield described the various species of birds and wildlife protected at the refuge. He also explained the different programs taken care of by the Fish and Wildlife Service.

The Scouts found the tour real educational & they expressed their thanks to Mr. Mansfield for an enjoyable day.

The Steele Ozone, Steele, No. Dak. (5/12/66)

Ted Schauer Gets Award

Theodore Schauer, Maintenance man at Slade National Wildlife Refuge completed 10 years of Government service (incudes over 3 years with the U. S. Army) on February 13. He started work at the Refuge on a part time basis on May 14, 1956. He began fulltime work on January 2, 1960.

In recognition for his service. Mr. Schauer was presented a ten-year emblem by Refuge Manager Marv Mansfied. The emblem is one form of recognition bestowed on employees by the Department of Interior's Incentive Awards Program.

Mr. Schauer is a real asset to the refuge program, reports Mansfield. His experience & knowledge of the area mean a lot because the work load has more than doubled in the last five years, primarily as a result of the wetland acquisition program.

The refuge is responsible for managing the acquired wetland areas in five counties, and Mr. Schauer is often required to travel 50-100 miles to get to the job. We congratulate him on his achievement and wish him continued success.

The Steele Ozone, Steele, No. Dak. (2/16/66)

Slade Refuge Dove Taken in Mexico

A mourning dove, which was banded at Slade National Wildlife Refuge, was reported taken at Hda. de Frias, Guanajuato, Mexico. The bird was banded as a juvenile on July 11, 1960, reports Refuge Manager Marvin Mansfield. Guanajuato is about 1,600 air miles from the Slade Refuge.

The dove was reported by Mr. Jaun Villanueva in a letter dated October 11, 1965. No information was given as to how the band was obtained, but it is presumed it was shot, since doves are highly prized for food in Mexico.

— o O o —

Steele Ozone, Steele, No. Dak. (5/5/66)

COPY OF NEWS RELEASE (4/13/66)

Slade National Wildlife Refuge
Dawson, North Dakota

FEDERAL RECREATION PERMITS ON SALE NOW

DAWSON--The new Federal Recreation Permits, an annual permit to enter certain specially-designated federal recreation areas, are now available at Slade National Wildlife Refuge.

The new permit, which costs $7, was authorized in September, 1964 when Congress passed the Land and Water Conservation Fund. Income from the sale of the stickers will go into this fund and will be used to provide additional federal recreation areas and to assist states in planning, acquiring and developing outdoor recreation areas and facilities.

Marvin Mansfield, manager of the Refuge, emphasized that purchase of the permit is optional, except for access to federal facilities where an entrance fee is charged. Even on these areas, the visitor may pay a single-entry or weekly fee in lieu of purchasing the permit, he said.

Federal agencies that may designate areas where the permit may be used are the National Park Service, the Bureau of Land Management, the Bureau of Sport Fisheries and Wildlife and the Bureau of Reclamation, all of the Department of the Interior; the Forest Service of the Department of Agriculture; the U. S. Army Corps of Engineers of the Department of Defense; the Tennessee Valley Authority; and the U. S. section of the International Boundary and Water Commission. Each such area will be identified by a sign stating that a fee is required.

No entrance fee or permit will be required at the Refuge this year, Mansfield said. On Bureau of Sport Fisheries and Wildlife facilities where improved recreation facilities are planned, the permits or entrance fees may be required in future years.

The permit is not usable at all designated areas, the manager said, because some of these may be entered only by foot. At such places, a single-entry fee will be required.

Some federal facilities providing special services to visitors will also make regular charges for these services in addition to entrance fees. The special charges would cover such services as cabin or campsite rentals, cut firewood, mechanical boat launching facilities and so forth.

Permits now on sale will be in effect until April 1, 1967. The annual permit will save money for those persons who visit these designated areas more than a few times a year, Mansfield added.

Federal Recreation Permits may also be purchased at any of the designated areas where entrance fees are charged.

COPY OF NEWS RELEASE

Slade National Wildlife Refuge
Dawson, North Dakota

COUNTIES RECEIVE MONEY FOR FEDERAL LANDS

Checks were recently distributed to the five counties which have Federal lands administered from Slade National Wildlife Refuge at Dawson. These lands consist of Waterfowl Production Areas and National Wildlife Refuges.

Refuge Manager Marvin Mansfield reports all five counties received a substantial increase over 1965. This resulted from a new federal formula which allows payments to the counties on the basis of a share of receipts or a percentage of the adjusted cost of these lands.

The County check amounted to $ The Bureau of Sport Fisheries and Wildlife said the funds must be used solely for the benefit of public schools and roads.

The check covers all lands where the deed was recorded by June 30, 1966. This means that in some instances the county received a double payment. They received tax money while the land was still in private ownership, and the payment from the Federal Government.

Counties		Sent to	Date
Emmons	- $ 716.55	Steele Ozone, Steele, N. D.	9/26/66
Kidder	- 1,774.43	Napoleon Homestead, Napoleon,ND	9/26/66
Logan	- 228.25	Bismarck Tribune, Bismarck, ND	9/26/66
McIntosh	- 454.20	Emmons County Record, Linton,ND	9/26/66
Burleigh	- 2,179.65	Ashley Tribune, Ashley, N. D.	9/26/66
		Wishek Star, Wishek, N. D.	9/26/66

COPY OF NEWS RELEASE

Slade National Wildlife Refuge
Dawson, North Dakota

NATIONAL WILDLIFE REFUGES TO BE OPEN TO DEER HUNTING

Long Lake and Slade National Wildlife Refuges will be open to deer gun hunting again this year reports Manager Marvin Mansfield. They will be open from 12:00 noon Nov. 11 to Sunset Nov. 20.

Long Lake Refuge contains 22,000 acres (most of which is under water), and is located in southeastern Burleigh and southwestern Kidder Counties. The Headquarters is one mile south and three miles east of Moffit.

Two areas will be closed to hunting on Long Lake Refuge. These will be marked with "Closed Area" signs. No vehicles will be allowed on this refuge except to pick up dead deer.

Slade Refuge contains 3,000 acres and is located two miles south and two miles east of Dawson. No vehicles will be allowed on the refuge except on the entrance road. Deer will be hauled out by refuge personnel.

Anyone on either refuge prior to the noon opening will be guilty of the refuge trespass law. Manager Mansfield states that hunters are welcome at both refuges as long as they are careful with fire, and obey all State and Federal laws. He also reports the deer population ranges from fair to good at the refuges.

Sent to	Date sent
Steele Ozone, Steele, N. D.	Nov. 4, 1966
Napoleon Homestead, Napoleon, N.D.	Nov. 4, 1966
Emmons County Record, Linton, N.D.	Nov. 4, 1966
Bismarck Tribune, Bismarck, N. D.	Nov. 8, 1966

This is a top crew, except for the guy on the right -
left to right - Messrs. Hansen, Schauer, Olson, Mansfield.
1/4/67 Mrs. M. Mansfield

FEB • 67 ⊙

Ted Schauer on snow removal duty after 7" snow.
2/14/66 Mansfield

Headquarters shelterbelt after the big blizzard.
3/7/66 Mansfield

• FEB • 67 ⊙

• FEB • 67 ⊙

Northern Pacific train snowbound about two miles north of Linton.
3/8/66 Mansfield

Refuge Lark in snow drift on Highway 13 about five miles east of Linton.
3/8/66 Mansfield

FEB • 67 ⊙

FEB • 67 ⊙

Highway 3 sign before painting.
8/1/66 Mansfield

Same as above after painting.
8/19/66 Mansfield

• SEP • 66 ⊙


FISH AND WILDLIFE SERVICE
TO SLADE
4-H CAMP

• SEP • 66 ⊙


U.S. DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
HEADQUARTERS
SLADE
NATIONAL WILDLIFE REFUGE
TO SLADE
4-H CAMP

M. C. Hammond operating Cat-a-gator in slough at Florence Lake Refuge during breeding pair count.
6/8/66 Mansfield

New nesting platforms in Recreation Slough.
Washing machine tub in foreground.
1/18/66 Mansfield

AUG • 66 ⊙

• FEB • 67 ⊙

This trap accounted for all the ducks banded at Slade Refuge. Total birds banded (413) included 393 blue-winged teal, 5 green-winged teal, 14 mallards and 1 pintail. There were 386 immature and 7 adult blue-wings. Of the immatures, 206 were females and 180 were males. Of the adults, 5 were females and 2 were males. Total cost was about $100.00.
8/17/66 Mansfield

The main banding crew. Left to right: Dick Mansfield, Student Laborer Frank Knoke, Doug Mansfield. Frank did most of the work on the project and deserves a lot of credit for an excellent job.
8/17/66 Mansfield

FEB • 67 ⊙

FEB • 67 ⊙

An opening day kill from a slough near Dawson. Four hunters took six mallards, four pintails, four widgeon and two redheads. There was only one hen in the bunch.
10/8/66 Mansfield

Ted Schauer with part of raccoon catch. Fourteen were taken during the year.
12/6/66 Mansfield

FEB • 67 ⊙

FEB • 67 ⊙

Dike #3 (left center) was constructed in July, 1965. The marsh filled in April and was the best waterfowl area on the refuge.
9/7/66 Mansfield

Sunburst Easement Refuge spillway with the March blizzard snow melt spilling.
3/15/66 Mansfield

FEB • 67 ⊙